
Tech Essentials

Course Syllabus and Planner

Course Overview

The CompuScholar **Tech Essentials** curriculum is a one-semester course covering required topics in many introductory “Computer Skills” or “Computer Science” classes for middle school students. Please visit our course description page for a video tour and alignment information.

<https://www.compuscholar.com/schools/courses/tech-essentials/>

Students should have basic familiarity with using a keyboard and mouse to interact with their operating systems before starting this course.

Course Material

The course consists of the following student-facing elements:

- **Instructional Videos** – optional (not required), but enjoyed by many students as an audio-visual introduction and reinforcement of the lesson topics.
- **Lesson Text** – required reading, contains full topic details and live coding exercises
- **Quizzes and Exams** – multiple-choice and automatically graded by our system
- **Chapter Activities** – hands-on projects, submitted for a grade

Teachers additionally have access to:

- **Teacher’s Guides** – for each lesson, with suggested classroom discussion questions
- **Quiz and Exam Answer Keys** – PDFs for quick reference
- **Activity Solution Guides** – fully coded activity solutions for each chapter activity

Hands-On Activities and Device Requirements

Every chapter contains one or more hands-on activities that allow students to practice and demonstrate understanding of the lesson topics. Activities can be completed on any Windows, Mac OS, Chromebook, or tablet device when using online options (like Google Docs). Teachers may use locally installed software (like Microsoft Office) if desired.

Course Planner

A typical school semester consists of approximately 18 calendar weeks or 90 days of school. The course plan covers approximately 90 school days.

Each “day” listed below represents one typical class period of 45 – 60 minutes, so students will typically work 3-5 hours per week. The suggested number of days factors in 1 day per lesson & lesson quiz, 1 day per activity, and 1 day per chapter test. Some classes may move faster or slower than the suggested pace.

Each chapter contains multiple lessons, quizzes, and a chapter test in addition to the listed Activities. Team Projects and other assignments may be adjusted to fit the available time.

Days	Reading and Objectives	Activities
6	Chapter One: File Management <ul style="list-style-type: none">• Understanding Files and Folders• Managing Files on Your Computer• File Associations• Managing Files in the Cloud	File Management
7	Chapter Two: Spreadsheets <ul style="list-style-type: none">• Choosing Software• Entering Data• Creating Graphs and Charts• Analyzing Data• Sharing, Publishing, and Printing	Expense Analysis

Days	Reading and Objectives	Activities
8	Chapter Three: Word Processing <ul style="list-style-type: none"> • Choosing Software • Creating and Editing Documents • Simple Formatting • Tables and Charts • Validation and Distribution • Typing Skills 	Bamboo Report
6	Chapter Four: Multimedia <ul style="list-style-type: none"> • Image Editors • Vector Graphics • Creating Sounds • Creating Videos 	Game Concept
5	Chapter Five: Online Research <ul style="list-style-type: none"> • Using Search Engines • Getting Help Online • Checking Online Sources 	Search and Evaluation
8	Chapter Six: Presentations <ul style="list-style-type: none"> • Choosing Software • Creating Slides • Formatting Slides • Tables and Charts • Adding Multimedia • Polished Presentations 	Food Import Presentation

Days	Reading and Objectives	Activities
10	Chapter Seven: Group Presentation Project <ul style="list-style-type: none"> • Working as a Team • Knowing Your Audience • Collaboration Tools • Project Requirements 	Planning and Research Creation Revision and Publication
7	Chapter Eight: Coding Concepts <ul style="list-style-type: none"> • Coding Languages • Simple Sequences • Data Types • Variables • Simple Math 	Tic-Tac-Toe Board Rectangle Areas
6	Chapter Nine: Program Flow <ul style="list-style-type: none"> • Input and Events • Conditionals • "for" Loops • Nested Loops • "while" Loops 	Artsy Square String Processor
6	Chapter Ten: Algorithms <ul style="list-style-type: none"> • Algorithms and Abstraction • Visual Design Tools • Pseudocode • Debugging 	Flower Power Rock-Paper-Scissors

Days	Reading and Objectives	Activities
10	Chapter Eleven: Software Projects <ul style="list-style-type: none"> • Project Planning • Design Process • Testing • Project Requirements 	Planning and Requirements Design Implementation Testing
6	Chapter Twelve: Digital Citizenship <ul style="list-style-type: none"> • Your Digital Footprints • Online Ethics • Intellectual Property • Trends in Technology 	Citizenship Challenges
5	Chapter Thirteen: Digital Safety <ul style="list-style-type: none"> • Safety Risks • Safeguards • Cyber-Bullying 	Cybersecurity Poster

Supplemental Chapters and Lessons are described on the next page.

Supplemental Chapters

Supplemental Chapters and lessons can be used as desired to meet state standards or provide enrichment topics for students.

Days	Reading and Objectives	Activities
4	Supplemental Chapter 1: Operating Systems <ul style="list-style-type: none"> • Popular Operating Systems • Using System Features - Windows • Using System Features - Mac OS 	(Integrated into each lesson)
5	Supplemental Chapter 2: Math Connections <ul style="list-style-type: none"> • Computer Number Systems • Lists and Sets • Math Functions 	Math Challenges
8	Supplemental Chapter 3: Databases <ul style="list-style-type: none"> • Basic Database Concepts • The Relational Model • Creating Tables • Inserting and Selecting Rows • Producing Reports 	Pet Directory Pet Report